

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A sheet feeding device, comprising:

a sheet pick-up device configured to pick up a first sheet from stacked sheets and to feed the first sheet by contacting the first sheet while rotating;

a sheet separating device configured to separate the first sheet from a second sheet to be fed by the sheet feeding device and to feed the first sheet to pull-out rollers that are the first rollers downstream from the sheet separating device in a sheet feeding direction with the first sheet by the sheet pick-up, the sheet separating device comprising:

a rotary member configured to feed the first sheet in a sheet feeding direction by contacting the first sheet while rotating; and

a roller configured to rotate in a direction opposite to the sheet feeding direction to prevent feeding of the second sheet with the first sheet;

a drive device configured to drive at least one of the sheet pick-up device and the rotary member to rotate;

at least two detecting devices, both located between the sheet separating device and the pull-out rollers, side-by-side, substantially in line in the sheet feeding direction and configured to detect a leading edge of the first sheet before the first sheet reaches the pull-out rollers; [[and]]

a control device configured to control sheet feeding[[,]];

a display device configured to display information, wherein

a first detecting device is disposed on a sheet feeding path between the sheet pick-up device and the sheet separating device,

when a first slip ratio of the first sheet fed in the sheet feeding path between the sheet pick-up device and the first detecting device exceeds a first slip threshold value, the control device is configured to display first information on the display device,

when a second slip ratio of the first sheet fed in the sheet feeding path between the first and the at least two detecting devices exceeds a second slip threshold value, the control device is configured to display second information on the display device, and

~~wherein~~ the control device is configured to change a rotational speed of at least one of the sheet pick-up device and the rotary member based on a detection result of the at least two detecting devices and a drive amount of the drive device.

Claims 2-8 (Canceled).

Claim 9 (Currently Amended): The sheet feeding device according to claim [[8]] 1,  
wherein

when the first slip ratio consecutively exceeds the first slip threshold value in the sheet feeding, the control device is configured to display the first information on the display device, and

when the second slip ratio consecutively exceeds the second slip threshold value in the sheet feeding, the control device is configured to display the second information on the display device.

Claim 10 (Canceled).

Claim 11 (Currently Amended): The sheet feeding device according to claim [[8]] 1,  
wherein the control device is configured to measure a first drive amount of the drive device during a first interval from when the drive device drives the sheet pick-up device to pick up the first sheet to when the first detecting device detects the leading edge of the first sheet, and the control device is configured to measure a second drive amount of the drive device during a second interval from when the first detecting device detects the leading edge of the first sheet to when the second detecting device detects the leading edge of the first sheet,

wherein the first slip ratio is obtained by a following calculation:

$$A1/B1$$

where A1 is the first drive amount, and B1 is a first theoretical value of the drive amount of the drive device to feed the first sheet in the sheet feeding path between the sheet pick-up device and the first detecting device, and

wherein the second slip ratio is obtained by a following calculation:

$$A2/B2$$

where A2 is the second drive amount, and B2 is a second theoretical value of the drive amount of the drive device to feed the first sheet in the sheet feeding path between the first detecting device and the second detecting device.

Claims 12-14 (Canceled).

Claim 15 (Currently Amended): An image reading apparatus, comprising:

an image reading device configured to read an image of an original document at an image reading position;

a sheet feeding device configured to feed the original document to the image reading position, the sheet feeding device comprising:

a sheet pick-up device configured to pick up a first original document from stacked original documents and to feed the first original document by contacting the first original document while rotating;

a sheet separating device configured to separate the first original document from a second original document fed with the first original document by the sheet pick-up device, the sheet separating device comprising:

a rotary member configured to feed the first original document in an original document feeding direction by contacting the first original document while rotating; and

a roller configured to rotate in a direction opposite to the original document feeding direction to prevent feeding of the second original document with the first original document;

a drive device configured to drive at least one of the sheet pick-up device and the rotary member to rotate;

at least two detecting devices, located side-by-side, substantially in line in the original document feeding direction downstream of the sheet separating device and configured to detect a leading edge of the first original document; [[and]]

a control device configured to control original document feeding[[,]]; and

a display device configured to display information, wherein

a first detecting device is disposed on an original document feeding path between the sheet pick-up device and the sheet separating device,

when a first slip ratio of the first original document fed in the original document feeding path between the sheet pick-up device and the first detecting device exceeds a first slip threshold value, the control device is configured to display first information on the display device,

when a second slip ratio of the first original document fed in the original document feeding path between the first and the at least two detecting devices exceeds a second slip threshold value, the control device is configured to display second information on the display device, and

~~wherein~~ the control device is configured to change a rotational speed of at least one of the sheet pick-up device and the rotary member based on a detection result of the at least two detecting devices and a drive amount of the drive device.

Claims 16-22 (Canceled).

Claim 23 (Currently Amended): The image reading apparatus according to claim [[22]] 15, wherein

when the first slip ratio consecutively exceeds the first slip threshold value in the original document feeding, the control device is configured to display first information on the display device, and

when the second slip ratio consecutively exceeds the second slip threshold value in the original document feeding, the control device is configured to display second information on the display device.

Claim 24 (Canceled).

Claim 25 (Currently Amended): The image reading apparatus according to claim [[22]] 15,

wherein the control device is configured to measure a first drive amount of the drive device during a first interval from when the drive device drives the sheet pick-up device to

pick up the first original document to when the first detecting device detects the leading edge of the first original document, and the control device is configured to measure a second drive amount of the drive device during a second interval from when the first detecting device detects the leading edge of the first original document to when the second detecting device detects the leading edge of the first original document,

wherein the first slip ratio is obtained by a following calculation:

$$A1/B1$$

where A1 is the first drive amount, and B1 is a first theoretical value of the drive amount of the drive device to feed the first original document in the original document feeding path between the sheet pick-up device and the first detecting device, and

wherein the second slip ratio is obtained by a following calculation:

$$A2/B2$$

where A2 is the second drive amount, and B2 is a second theoretical value of the drive amount of the drive device to feed the first original document in the original document feeding path between the first detecting device and the second detecting device.

Claims 26-28 (Canceled).

Claim 29 (Currently Amended): An image forming apparatus, comprising:

an image reading device configured to read an image of an original document at an image reading position;

an image forming device configured to form a duplicate of the image read by the image reading device;

a sheet feeding device configured to feed the original document to the image reading position, the sheet feeding device comprising:

a sheet pick-up device configured to pick up a first original document from stacked original documents and to feed the first original document by contacting the first original document while rotating;

a sheet separating device configured to separate the first original document from a second original document fed with the first original document by the sheet pick-up device, the sheet separating device comprising:

a rotary member configured to feed the first original document in an original document feeding direction by contacting the first original document while rotating; and

a roller configured to rotate in a direction opposite to the original document feeding direction to prevent feeding of the second original document with the first original document;

a drive device configured to drive at least one of the sheet pick-up device and the rotary member to rotate;

at least two detecting devices, located side-by-side, disposed downstream of the sheet separating device substantially in line in the original document feeding direction and configured to detect a leading edge of the first original document; and

a control device configured to control original document feeding[[,]]; and

a display device configured to display information, wherein

a first detecting device is disposed on an original document feeding path between the sheet pick-up device and the sheet separating device,

when a first slip ratio of the first original document fed in the original document feeding path between the sheet pick-up device and the first detecting device exceeds a first slip threshold value, the control device is configured to display a first information on the display device and

when a second slip ratio of the first original document fed in the original document feeding path between the first and the at least two detecting devices exceeds a second slip threshold value, the control device is configured to display second information on the display device, and

~~wherein~~ the control device is configured to change a rotational speed of at least one of the sheet pick-up device and the rotary member based on a detection result of the at least two detecting devices and a drive amount of the drive device.

Claims 30-36 (Canceled).

Claim 37 (Currently Amended): The image forming apparatus according to claim [[36]] 29, wherein

when the first slip ratio consecutively exceeds the first slip threshold value in the original document feeding, the control device is configured to display the first information on the display device, and

when the second slip ratio consecutively exceeds the second slip threshold value in the original document feeding, the control device is configured to display the second information on the display device.

Claim 38 (Canceled).

Claim 39 (Currently Amended): The image forming apparatus according to claim [[36]] 29,

wherein the control device is configured to measure a first drive amount of the drive device during a first interval from when the drive device drives the sheet pick-up device to



pick up the first original document to when the first detecting device detects the leading edge of the first original document, and the control device is configured to measure a second drive amount of the drive device during a second interval from when the first detecting device detects the leading edge of the first original document to when the second detecting device detects the leading edge of the first original document,

wherein the first slip ratio is obtained by a following calculation:

$$A1/B1$$

where A1 is the first drive amount, and B1 is a first theoretical value of the drive amount of the drive device to feed the first original document in the original document feeding path between the sheet pick-up device and the first detecting device, and

wherein the second slip ratio is obtained by a following calculation:

$$A2/B2$$

where A2 is the second drive amount, and B2 is a second theoretical value of the drive amount of the drive device to feed the first original document in the original document feeding path between the first detecting device and the second detecting device.

Claims 40-45 (Canceled).